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[redacted]
8 April 1966

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MEMORANDUM FOR: Chief Technical Intelligence Division
TO:
FROM:
SUBJECT: Chief, Technical Services Branch
Low Gamma Processing Experiment,
[redacted]

1. This memorandum describes the Low Gamma Processing Conference [redacted] The conference was conducted on 5-6 April 1966.

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2. The purpose of the meeting was to analyze and evaluate the processing of the last 63 feet of the master camera film [redacted]. That film had been removed prior to processing of the normal mission product for the purpose of a low gamma processing experiment.

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[redacted] the referenced film was slit along the major axis providing two strands of film - 35 mm x 63 feet. One half of the film was then processed in the [redacted] processor at the intermediate level and the other half in an [redacted] processor using low gamma processing chemistry.

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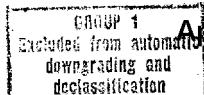
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3. The film from both processors was then printed at various levels. Because the group recognized that photo interpretation is accomplished almost exclusively on positive transparencies, the emphasis was on image quality of the prints rather than the original negative. Therefore, the prints were compared to determine the printing/processing combination that provided the best PI suitability.

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Declass Review by NIMA / DoD

NRO review(s)



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[redacted]

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4. No absolute solution evolved. The low gamma copies provided detail in highlight areas to a greater degree than did the normal gamma prints. Inversely, the normal prints seemed to have more detail in the shadows than the low gamma copies. Furthermore, the details in the low gamma copies, being of lower contrast, were not as readily apparent and more effort was necessary in the observation of all recorded images. The film positives will be forwarded to EPIC for further evaluation. The Center was asked to be prepared to discuss its image analysis at the next PEIR meeting.

5. In the appraisal of the two techniques being considered, the following items are significant:

a. Low gamma processing chemistry is not compatible with a spray [redacted] processing technique. The developer oxidizes rapidly.

b. A viscose has not yet been developed that is compatible with low gamma processing solutions. However, representatives [redacted] are confident that a suitable viscose could be formulated.

c. If a deep tank processor were used [redacted] the machine confidence level would be greatly reduced.

d. If [redacted] low gamma process were used, an increase in exposure or faster film would probably be necessary. Both would cause degradation.

e. [redacted] formulated a developer that provides increased speed in the toe of the curve allowing the present exposure/film combination to be used successfully. However, the chemicals of that process deteriorate even faster than [redacted] low gamma formula [redacted] therefore claims there is little practical application for the [redacted] chemistry.

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6. In general conversation, the group discussed the possibility of processing the original negative in the conventional way (2.2 gamma) and processing the positives to a low gamma (1.4 gamma) or processing the original to a low gamma and the positives to a higher gamma. While nothing was resolved, the idea was projected for further consideration.

7. The meeting accomplished its intended purpose. It was ascertained that low gamma processing merits further consideration. Also, there was a free and profitable exchange of ideas among the attendees. The NPIC representative was enthusiastically welcomed as an arbitrator among the [redacted] commercial interests that were represented.

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